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Federal-State Cooperative
Snow Surveys and Water Supply Forecasts
for
Platte and Arkansas Drainage Basin

SOIL CONSERVATION SERVICE
UNITED STATES DEPARTMENT OF AGRICULTURE
AND
COLORADO AGRICULTURAL EXPERIMENT STATION

Data included in this report were obtained by the agencies named above in cooperation with the U. S. Forest Service, National Park Service, State Engineers of Colorado, Wyoming and New Mexico and other Federal, State and local organizations.

— AS OF —

MAY 1, 1955

UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

TO RECIPIENTS OF COOPERATIVE SNOW SURVEY
AND WATER SUPPLY FORECAST REPORTS:

Forecasts by U. S. Weather Bureau of total annual streamflow October-September, inclusive, at more than 300 gaging stations are issued monthly January through May in the publication WATER SUPPLY FORECASTS FOR THE WESTERN UNITED STATES.

Weather Bureau forecasts of runoff presented in that bulletin are computed from procedures based on mathematical analysis of the relation between precipitation and runoff.

The Weather Bureau bulletins may be secured by writing to:

Hydrologist in Charge
River Forecast Center
U. S. Weather Bureau
712 Federal Office Building
Kansas City 6, Missouri

For current information on local river and flood conditions, reference should be made to the appropriate River District Office listed below:

Climatologist.....	North Platte and South
Weather Bureau Office	Plate Rivers, and
Box 1079	tributaries, above
Denver 1, Colo.	North Platte, Nebr.

Meteorologist in Charge.....	Arkansas River and
Weather Bureau Airport Station	tributaries in
Municipal Airport	Colorado
Pueblo, Colorado.	

Platte and Arkansas Rivers

FEDERAL-STATE COOPERATIVE
SNOW SURVEYS AND WATER SUPPLY FORECASTS
for
PLATTE-ARKANSAS RIVERS BASIN

Issued

May 9, 1955

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WATER SUPPLY OUTLOOK
PLATTE-ARKANSAS DRAINAGE BASINS
May 1, 1955

The 1955 outlook for irrigation water supply over the Platte and Arkansas areas is fair to poor. Snow-cover remaining over the North Platte watershed was about 80 percent of normal. On the South Platte and Arkansas watersheds the low snow is gone and at high elevations snow-cover is now about 70 percent of normal for this date. Snow-melt season streamflow into Seminoe Reservoir on the North Platte will be about three-quarters of normal and less for South Platte the tributaries and the Arkansas. However, streamflow is not the whole picture. In estimating the water supply, the extreme shortage in reservoir storage must be considered. The deficiency in storage from the past ten-year average is estimated at three-quarters of a million acre-feet for these two basins in Colorado and Wyoming. This is almost equal to the average annual flow of all South Platte tributaries as they emerge from the mountains. Carry-over storage is a major factor this year on all watersheds. Soil in irrigated areas is dry and streamflow is below average.

NORTH PLATTE RIVER

On the Sweetwater River, snow-cover is slightly less than normal. Runoff in Pathfinder Reservoir next summer will be substantially below average.

Snow-cover on the North Platte watershed in Colorado and Wyoming is 80 percent of normal. A departure from normal is heavy snow in the Laramie Peaks District south of the river between Casper and Douglas. On the upper watershed the snow cover now is 30 percent greater than on May 1, 1954. Inflow to Seminoe Reservoir this year is expected to be greater than for a year ago at about three-quarters of normal. Storage in the four major reservoirs on the North Platte in Wyoming now totals 1,100,000 acre-feet as compared to 1,320,000 acre-feet a year ago. Most of this water is assigned to the Alcova Project with very little available for the irrigated areas of eastern Wyoming and western Nebraska. Irrigation water supplies in the latter area will be dependent on 1955 summer flows supplemented by rainfall. Shortage of irrigation water is expected.

On the Laramie River watershed, the water supply outlook is less favorable than for the North Platte. Snow-cover is about 70 percent of normal. Wheatland Reservoir is almost empty as compared with a usual carry-over of about 35,000 acre-feet. The watershed needs a lot of additional snow and rainfall within the next few months.

Soils in irrigated areas are dry and streamflow is below average.

SOUTH PLATTE

Snow-cover on the South Platte watershed declined sharply during April due to lack of precipitation and high temperatures. There is practically no snow at lower elevations. At higher elevations snow-cover is generally a little above May 1, 1954 but much below average. Assuming that rainfall during May, June and July is near average streamflow during the summer months of 1955 should be slightly higher than in 1954. Forecasts range from 50 to 70 percent of normal with the higher flows expected on the Poudre River, Clear Creek and Upper South Platte.

Even if natural streamflow is well above 1954, the extreme shortage in carry-over storage, as compared to 1954 and average, points to a repetition of water shortages in 1955. Twenty-eight large municipal and irrigation reservoirs show a total storage of 256,000 acre-feet as compared to 428,000 on May 1, 1954 and over one-half million acre-feet for the past ten-year average. Storage is only 40 percent of the mean and one-half of a year ago. In Denver's four major reservoirs there is now stored 62,000 acre-feet as compared with 126,000 a year ago and 162,000 for a ten-year average.

The above figures do not include reservoirs on the Colorado-Big Thompson Project. This provided about half of the water supply for the area served by Northern Colorado Conservancy District in 1954. Supplies from this source will be about two-thirds of that for 1954 during the summer of 1955.

Storms during February and March improved soil moisture conditions in irrigated areas slightly, but April was extremely dry. Irrigated soils are dry for this time of year.

The general water supply outlook for the South Platte is similar to that which occurred in 1954. Even if summer rainfall should be well above normal, the shortage of water will be extensive. If summer rainfall is short, water shortage could be more severe than in 1954.

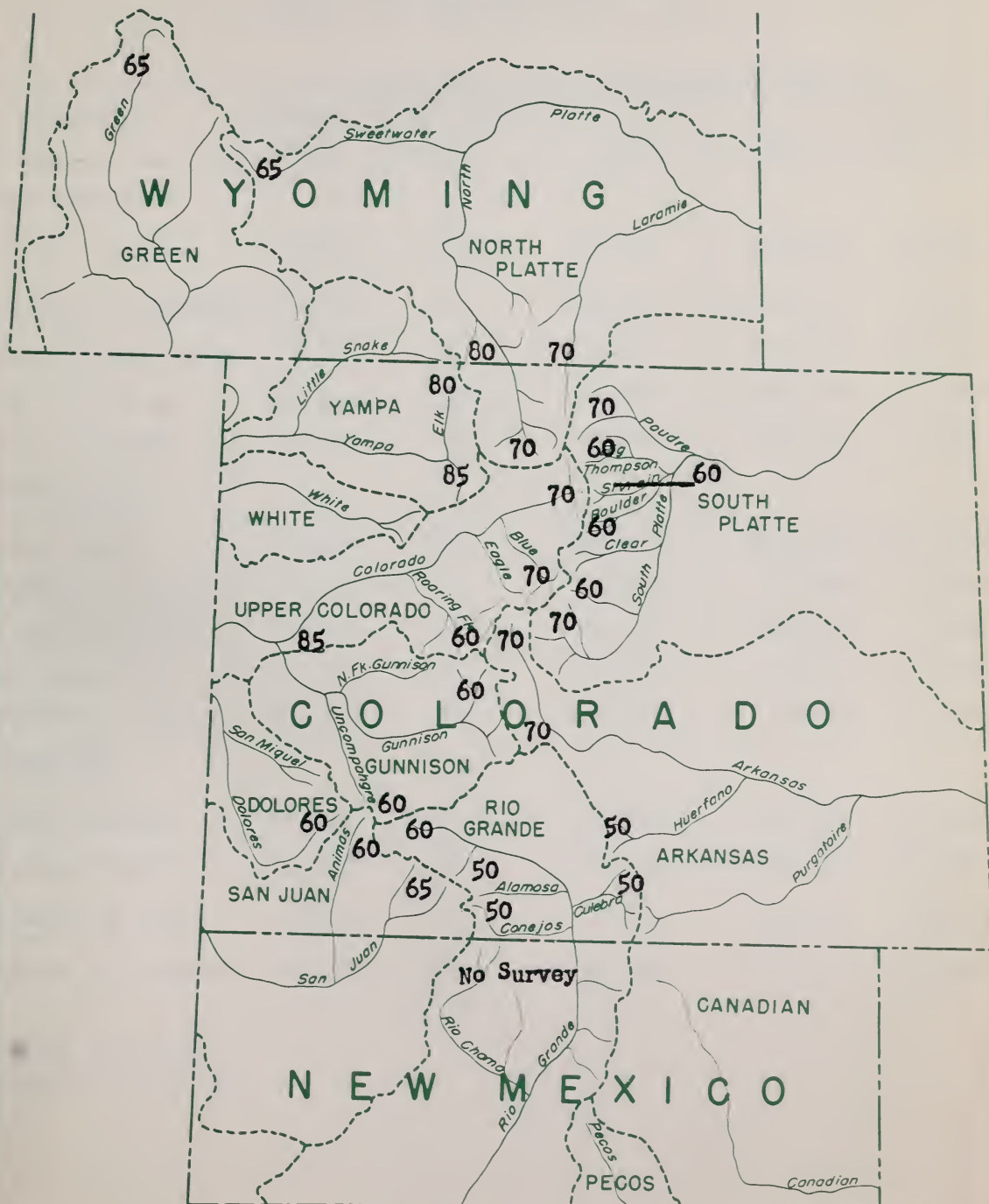
ARKANSAS

There is another year of short water supply in view for the irrigated area along the Arkansas River in Colorado and Kansas. There is practically no water in storage which will be necessary for early irrigation in the Arkansas Valley. Soils in irrigated areas are extremely dry. Snow-cover in the mountains remaining as of May 1 is about 70 percent of normal on the Upper Arkansas River above Salida. There is practically no snow except at extremely high elevations on the Huerfano, Cucharas and Purgatoire Rivers.

Forecasts of summer flow declined during April. The flow of the Arkansas River at Salida will be more than in 1954 but only two-thirds of the past ten-year average. The flow of the southern tributaries is expected to be less than one-half of average. Even if summer rainfall is high, the shortage of water along the Arkansas River will be severe. Water users should plan to reduce their water requirements to the expected available supply.

WATER CONTENT OF SNOW ON THE WATERSHEDS OF
PLATTE, ARKANSAS, UPPER COLORADO AND RIO GRANDE BASINS
BASED ON SNOW SURVEYS MADE APPROXIMATELY FIRST DAY OF MONTH

In Percent of Normal
May 1, 1955



Note: The figures above are for snow water content remaining on the watershed as of May 1 and do not necessarily represent expected streamflow. See streamflow forecasts.

PLATTE-ARKANSAS DRAINAGE BASINS
STREAM FLOW FORECASTS, May 1, 1955

Basin and Stream	April-Sept., Incl., Streamflow, Acre Feet				
	Forecast 1955	% of 10-yr. Average	1953	1952	10-year Avg. 1943-1952

NORTH PLATTE

Sweetwater at Alcova	49,000	55	42,000	100,000	86,000
North Platte at Saratoga	500,000	70	428,000	1,053,000	718,000
Medicine Bow near Hanna	79,000	68	60,000	144,000	116,000
Laramie at Jelm	65,000	64	64,000	124,000*	101,000*
Laramie at Lookout	49,000	55	28,000	96,000	89,000

SOUTH PLATTE

Poudre at Canon	150,000	68	114,000**	217,000**	219,000**
Big Thompson at Drake	65,000**	57	60,000**	98,000**	114,000**
Saint Vrain at Lyons	48,000	53	61,000	121,000	91,000
Boulder at Orodell	40,000	71	52,000	75,000	56,000
Clear Creek at Golden	110,000*	78	117,000*	170,000*	141,000*

ARKANSAS

Arkansas at Salida	250,000	72	320,000*	533,000*	344,000*
Arkansas at Pueblo	230,000	66	250,000*	480,000*	347,000*
Cucharas at La Veta	8,000	57	5,000	21,000	14,000
Purgatoire at Trinidad	18,000	40	36,000	53,000	45,000

*Including Diversions

**Excluding Diversions

STATUS OF RESERVOIR STORAGE PLATTE-ARKANSAS BASIN, May 1, 1955

BASIN AND STREAM	RESERVOIR	USABLE CAPACITY (Thous. A.F.)	THOUSANDS ACRE FEET IN STORAGE			
			About May 1			10-year Avg. 1943-1952
			1955	1954	1953	
MISSOURI RIVER						
Poudre River	Windsor	18.6	3.1	6.2	11.8	13.3
" "	Cache la Poudre	9.5	5.3	6.0	8.3	8.0
" "	Fossil Creek	11.6	3.8	5.5	8.9	9.1
" "	Terry Lake	8.2	4.9	4.1	4.0	5.2
" "	Halligan	6.4	4.8	5.0	5.3	1.9
" "	Chamber's Lake	8.8	2.7	1.9	2.1	2.7
" "	Cobb Lake	34.3	0.0	7.0	11.1	6.5
" "	Black Hollow	8.0	0.9	3.2	4.1	3.6
Big Thompson River	Lake Loveland	14.3	4.9	7.2	6.0	7.0
" " "	Boyd Lake	44.0	0.0	7.9	16.9	23.1
" " "	Lone Tree	9.2	8.0	7.6	8.7	8.4
" " "	Mariano	5.4	0.3	3.4	3.8	3.2
St. Vrain River	Union	12.7	1.0	6.1	9.1	8.6
South Platte River	Eleven Mile	81.9	17.3	81.9	81.9	80.9
" " "	Cheeseman	79.0	21.9	22.8	57.0	60.4
" " "	Marston	18.9	12.8	11.8	14.5	15.6
" " "	Barr Lake	32.2	14.9	13.9	24.1	27.0
" " "	Milton	24.4	0.8	3.8	14.8	16.4
" " "	Standley	18.5	5.5	6.9	12.7	14.3
" " "	Marshall	10.3	0.4	0.9	2.7	4.3
" " "	Antero	33.0	10.2	10.2	10.2	19.2
" " "	Horse Creek	20.6	5.6	9.9	13.3	12.7
" " "	Riverside	57.5	16.2	45.4	59.3	55.9
" " "	Empire	37.7	10.0	27.5	34.1	32.9
" " "	Jackson Lake	35.4	33.1	31.2	35.4	34.7
" " "	Prewitt	32.8	4.4	10.5	28.8	27.8
" " "	Point of Rocks	70.0	42.3	58.5	69.6	66.6
" " "	Julesburg	28.2	21.2	21.9	22.4	22.2

RESERVOIR STORAGE (Cont.)

BASIN AND STREAM	RESERVOIR	USABLE CAPACITY (Thous. A.F.)	THOUSANDS ACRE FEET IN STORAGE			
			About May 1			10-year Avg.* 1943-1952
			1955	1954	1953	
North Platte River	Kingsley	2180.0	1232.0	1589.8	1826.0	1396.7
" " "	Sutherland	185.0	49.8	45.0	64.0	43.3
" " "	Minatare	60.8	35.6	35.5	52.4	47.7
" " " "	Alcova	190.0	187.7	186.8	179.7	146.8
" " "	Seminole	1025.0	364.1	268.3	553.7	462.0
" " "	Guernsey	46.0	30.8	44.6	7.7	30.1
" " " "	Pathfinder	1045.5	513.2	919.0	892.9	619.7
Laramie River	Wheatland	70.4	1.5	12.1	36.0	56.3
ARKANSAS RIVER						
Arkansas River	Twin Lakes	57.9	13.7	13.6	25.7	21.9
" " "	Sugar Loaf	17.4	5.0	5.3	5.4	7.8
" " "	Clear Creek	11.4	2.1	0.5	2.2	5.3
" " "	Meredith	41.9	0.0	0.0	0.0	23.3
" " "	Horse Creek	26.9	0.0	0.0	0.0	11.1
" " "	Adobe Creek	61.6	0.0	0.0	0.0	31.7
" " "	Cucharas	40.0	0.0	0.0	0.0	5.4
" " "	John Martin	655.0	0.0	0.0	0.0	67.5
" " "	Great Plains	150.0	0.0	0.0	3.5	76.2
Purgatoire River	Model	15.0	0.0	0.0	1.0	3.3
COLORADO-BIG THOMPSON						
Blue River	Green Mt.	146.9	51.8	45.8	63.2	54.1
Colorado River	Granby	467.5	151.2	360.5	426.0	-- *
Poudre River	Horsetooth	143.5	108.8	121.6	128.0	-- *
Big Thompson	Carter	112.4	65.5	41.9	--	-- *

*Some for shorter periods

PLATTE-ARKANSAS DRAINAGE BASINS
SUMMARY OF MAY 1 SNOW SURVEYS
AND COMPARISON OF DATA WITH THAT
OF PREVIOUS YEARS

May 1, 1955

WATERSHEDS	No. of Courses Averaged	Years of Record	May 1, 1955 Water Contents as percent of		
			1954	1953	Average
PLATTE RIVER					
Sweetwater	3	5-18	88	145	79
North Platte River	13	5-19	131	87	75
Laramie River	9	6-19	115	71	64
South Platte River*	5	6-19	200	53	58
Poudre River	8	4-19	106	66	60
Big Thompson River	4	4-17	99	57	54
St. Vrain River	3	5-19	79	30	31
Boulder Creek	3	5-19	113	58	56
Clear Creek	5	4-19	95	34	40
ARKANSAS RIVER	9	5-19	217	79	76
COLORADO-BIG THOMPSON					
Colorado River**	6	6-19	92	56	51
Willow Creek	3	6-19	158	33	26
Frazer River	5	4-19	188	59	60
Blue River	7	4-19	122	54	54

* Above Denver

**Above Granby

PRECIPITATION DATA

WATERSHED	STATE	Precipitation*	Departure	Precipitation*	Departure
		Oct. 1 to April 30	from Normal	April	from Normal
		Inches	Inches	Inches	Inches
North Platte	Wyoming	4.53	-2.94	0.44	-1.17
South Platte	Colorado	3.19	-3.09	0.20	-1.77
Arkansas	Colorado	4.77	-2.10	0.91	-0.93

*Average selected high elevation stations

PLATTE-ARKANSAS RIVERS SNOW SURVEYS

May 1, 1955

Drainage Basin and Snow Course	Number	Elev.	Snow Cover Measurement						
			1955			Past Record			
			Date of Survey	Snow Depth (In.)	Water Content (In.)	Water Content (In.)			Years of Record
						1954	1953	Average	

PLATTE RIVER

SWEETWATER RIVER

Grannier Meadows	8G4	9000	5/1	35	13.1	16.0	9.7	14.0	18
South Pass*	8G3	9000	5/1	37	14.0	16.8	10.2	14.0	15
Larsen Creek	9G6	9000	4/28	5	1.7	0.0	0.0	8.2	5

NO. PLATTE RIVER

Cameron Pass	5J1	10340	4/28	44	16.9	17.5	21.8	23.7	19
Park View	6J2	9200	4/29	7	1.5	0.8	6.6	7.0	19
Columbine Lodge	6J3	9300	4/29	43	19.3	8.7	25.9	20.2	19
Willow Cr. Pass*	6J5	9500	4/29	17	4.2	2.7	8.3	12.6	17
Northgate	6J7	8500	4/29	0	0.0	0.0	1.8	2.5	5
Bottle Creek	6H8	8200	4/26	29	10.0	7.0	9.9	9.6	19
Webber Spring	6H9	9000	4/26	35	13.0	9.0	13.7	16.8	19
Old Battle	6H10	9800	4/26	66	26.0	24.2	27.2	33.4	19
N. French Creek	6H4	10200	4/25	68	26.3	26.5	26.3	32.5	17
North Barrett Cr.	6H5	9400	4/25	48	16.9	14.9	13.7	21.2	19
Ryan Park	6H6	8400	4/25	21	7.7	3.2	3.9	7.1	19
Spring Creek	6H7	9000	4/26	33	12.8	8.2	12.2	15.4	6
Albany	6H11	9400	4/30	10	4.1	2.0	10.4	11.3	6
La Bonte	5G2	8450	4/28	0	0.0	0.0	0.0	0.0	6
Boxelder	5G1	9000	4/28	19	6.2	1.4	8.3	5.5	5

LARAMIE RIVER

Deadman Hill	5J6	10200	4/29	41	14.6	11.2	12.8	16.7	16
Roach	5J12	9800	4/30	45	16.2	15.7	15.9	20.4	14
McIntyre	5J15	9100	5/1	21	6.1	4.4	NS	8.8	6
Brooklyn Lake	6H1	10200	4/30	44	17.5	18.0	27.0	25.4	19
Fox Park	6H12	9200	4/29	0	0.0	0.0	1.8	5.2	19
Pole Mtn. #2*	5H1	8700	4/30	0	0.0	0.4	0.0	2.1	18
Libby Lodge	6H3	8700	4/29	11	3.6	1.5	8.5	6.0	19
Hairpin Turn	6H2	9500	4/29	22	6.7	6.5	11.7	11.4	19
Albany	6H11	9400	4/30	10	4.1	2.0	10.4	11.3	6

POUDRE RIVER

Cameron Pass	5J1	10300	4/28	44	16.9	17.5	21.8	23.7	19
Chambers Lake	5J2	9000	5/1	0	0.0	0.8	3.0	4.0	19
Eig South	5J3	8600	5/1	0	0.0	0.5	0.3	0.6	19
Deadman Hill	5J6	10200	4/29	41	14.6	11.2	12.8	16.7	16
Lake Irene*	5J10	10600	5/1	39	14.6	16.9	23.1	23.9	17
Hour Glass Lake	5J11	9500	5/1	8	2.3	1.1	7.7	7.7	15
Red Feather	5J20	9000	4/29	5	1.6	0.0	5.9	4.4	6
Lost Lake	5J23	9300	5/1	13	4.1	3.0	7.6	9.4	4

* On adjacent drainage

NS No survey

PLATTE-ARKANSAS RIVERS SNOW SURVEYS

May 1, 1955

Drainage Basin and Snow Course	Number	Elev.	Snow Cover Measurements						
			1955			Past Record			Years of Record
			Date of Survey	Snow Depth (In.)	Water Content (In.)	Water Content (In.)			
						1954	1953	Average	
BIG THOMPSON RIVER									
Lake Irene*	5J10	10600	5/1	39	14.6	16.9	23.1	23.9	17
Hidden Valley	5J13	9550	4/30	25	7.4	7.1	13.6	13.3	14
Deer Ridge	5J17	9050	4/30	3	0.7	0.5	3.9	3.4	6
Longs Peak	5J22	10500	4/28	25	7.1	5.3	11.4	13.9	4
ST. VRAIN RIVER									
Wild Basin	5J5	10000	4/29	19	6.8	6.9	15.0	14.3	19
Copeland Lake	5J18	8600	4/29	0	0.0	0.7	2.3	2.4	6
Ward	5J21	9500	5/1	0	0.0	0.0	5.2	5.4	5
BOULDER CREEK									
E. Port.Moffat T	5K1	9400	4/20	2	1.0	0.5	3.5	2.0	19
University Camp	5J8	10300	4/30	42	16.0	15.1	25.3	23.2	16
Moffat	5K12	9400	4/28	4	1.2	0.6	5.0	7.6	5
Boulder Falls	5J25	10000	4/30	17	6.9	1.6	17.0		3
CLEAR CREEK									
Loveland Pass	5K5	10600	4/27	22	6.8	5.3	18.8	13.9	19
Grizzly Peak*	5K9	11250	4/27	30	10.2	12.6	20.7	19.7	13
Empire	5K10	9650	4/30	5	1.3	1.0	5.2	6.4	6
Berthoud Falls	5K13	10500	4/30	12	3.5	2.0	18.3	13.9	4
Clear Creek	5K17	11300	4/27	29	8.9	11.4	23.1	21.5	4
SOUTH PLATTE RIVER (Above Denver)									
Hoosier Pass	6K1	11400	4/29	20	5.9	3.0	12.2	11.2	19
Fairplay	6K2	10000	4/29	0	0.0	0.8	0.0	0.1	19
Jefferson Cr.	5K8	10100	4/29	20	5.4	1.6	8.6	7.2	15
Geneva Park	5K11	9750	4/29	2	0.9	0.4	1.6	1.7	6
Antero	5L1	9200	4/29	0	0.0	0.0	0.0	0.2	6
ARKANSAS RIVER									
ARKANSAS RIVER									
Tennessee Pass	6K2	10200	4/30	0	0.0	0.0	7.4	6.0	19
Twin Lakes T.	6K3	10500	5/2	12	4.2	3.3	7.3	8.7	18
La Veta Pass*	5M1	9300	5/2	0	0.0	1.0	0.0	3.3	19
4-Mile Park	6K7	9700	4/30	0	0.0	0.0	0.0	0.3	17
Fremont Pass	6K8	11400	4/28	45	14.2	12.0	17.4	17.7	19
Blue Lakes	5M2	10000	5/2	9	3.2	2.2	2.1	6.4	17
Monarch Pass	6I4	10500	4/29	33	12.6	3.2	18.3	18.1	14
St. Elmo	6L5	10600	5/2	12	4.0	2.5	NS	11.2	5
Timberline	6K11	11100	4/25	49	20.4	8.6	25.6	20.0	6
Cooper Hill	6K16	10600	4/28	1.0	3.0	0.0	9.3		3
East Fork	6K17	10700	4/29	8	2.1	0.0	9.8		3
Westcliffe	5L2	9000	4/29	0	0.0	1.4	0.0		2

*On adjacent drainage

NS - No Survey

PLATTE-ARKANSAS RIVERS SNOW SURVEYS

May 1, 1955

Drainage Basin and Snow Course	Number	Elev.	Snow Cover Measurement						
			1955			Past Record			
			Date of Survey	Snow Depth (In.)	Water Content (In.)	Water Content (In.)			Years of Record
						1954	1953	Average	

COLORADO - BIG THOMPSON PROJECT

COLORADO RIVER**

Cameron Pass*	5J1	10300	4/29	44	16.9	17.5	21.8	23.7	19
Phantom Valley	5J4	9300	5/1	0	0.0	0.0	7.3	6.1	19
Lulu	5J7	10200	5/1	38	11.5	12.2	14.0	19.0	15
N. Inlet Grand L.	5J9	9000	5/1	0	0.0	0.0	7.6	7.3	17
Lake Irene	5J10	10600	5/1	39	14.6	16.9	23.1	23.9	17
Grand Lake	5J19	8600	5/1	0	0.0	0.0	3.8	4.0	6

WILLOW CREEK

Park View*	6J2	9200	4/29	7	1.5	0.8	6.6	7.0	19
Willow Creek	6J5	9500	4/29	17	4.2	2.7	8.3	12.6	17
Granby	5J16	8700	4/30	0	0.0	0.0	2.2	2.4	6

FRAZER RIVER

Berthoud Pass	5K3	9700	4/29	28	9.3	4.2	12.0	14.5	19
Arrow	5K6	9900	4/29	14	4.6	0.0	5.9	7.2	17
Lapland	5K7	9500	4/30	2	0.8	0.4	9.5	8.5	17
Berthoud Summit	5K14	11300	4/30	45	14.7	12.1	23.7	20.7	4
Frazer View	5K15	10600	4/30	23	8.0	3.3	12.9	11.3	4

BLUE RIVER

Hoosier Pass	6K1	11400	4/29	20	5.9	3.0	12.2	11.2	19
Fremont Pass	6K8	11400	4/28	45	14.2	12.0	17.4	17.7	19
Shrine Pass	6K9	10500	4/28	34	12.2	10.4	19.9	18.3	13
Grizzly Peak	5K9	11250	4/27	30	10.2	12.6	20.7	19.7	13
Frisco	6K13	9300	4/27	0	0.0	0.0	5.6	5.3	4
Snake River	5K16	9700	4/27	0	0.0	0.0	5.5	6.3	4
Summit Ranch	6K14	10000	4/30	11	3.8	0.0	4.0	6.6	4
Kokomo	6K18	10600	4/27	17	4.5	4.4	12.3		3

*On adjacent drainage

**Above Granby Reservoir

STATIONARY AND PORTABLE ENGINE

Horse Power	Type	Fuel Consumption (lb. per hour)				Water Consumption (gallons per hour)	
		Gasoline	Oil	Coal	Wood	Boiler	Engine

STATIONARY ENGINE - 100 H.P.

10	1000	100	100	100	100	100	100
11	1100	110	110	110	110	110	110
12	1200	120	120	120	120	120	120
13	1300	130	130	130	130	130	130
14	1400	140	140	140	140	140	140
15	1500	150	150	150	150	150	150
16	1600	160	160	160	160	160	160
17	1700	170	170	170	170	170	170
18	1800	180	180	180	180	180	180
19	1900	190	190	190	190	190	190
20	2000	200	200	200	200	200	200
21	2100	210	210	210	210	210	210
22	2200	220	220	220	220	220	220
23	2300	230	230	230	230	230	230
24	2400	240	240	240	240	240	240
25	2500	250	250	250	250	250	250
26	2600	260	260	260	260	260	260
27	2700	270	270	270	270	270	270
28	2800	280	280	280	280	280	280
29	2900	290	290	290	290	290	290
30	3000	300	300	300	300	300	300
31	3100	310	310	310	310	310	310
32	3200	320	320	320	320	320	320
33	3300	330	330	330	330	330	330
34	3400	340	340	340	340	340	340
35	3500	350	350	350	350	350	350
36	3600	360	360	360	360	360	360
37	3700	370	370	370	370	370	370
38	3800	380	380	380	380	380	380
39	3900	390	390	390	390	390	390
40	4000	400	400	400	400	400	400
41	4100	410	410	410	410	410	410
42	4200	420	420	420	420	420	420
43	4300	430	430	430	430	430	430
44	4400	440	440	440	440	440	440
45	4500	450	450	450	450	450	450
46	4600	460	460	460	460	460	460
47	4700	470	470	470	470	470	470
48	4800	480	480	480	480	480	480
49	4900	490	490	490	490	490	490
50	5000	500	500	500	500	500	500

For complete details
address: "The Engine Company"

LIST AND LOCATION OF SNOW COURSES

Platte, Arkansas, Colorado
and Rio Grande Drainages

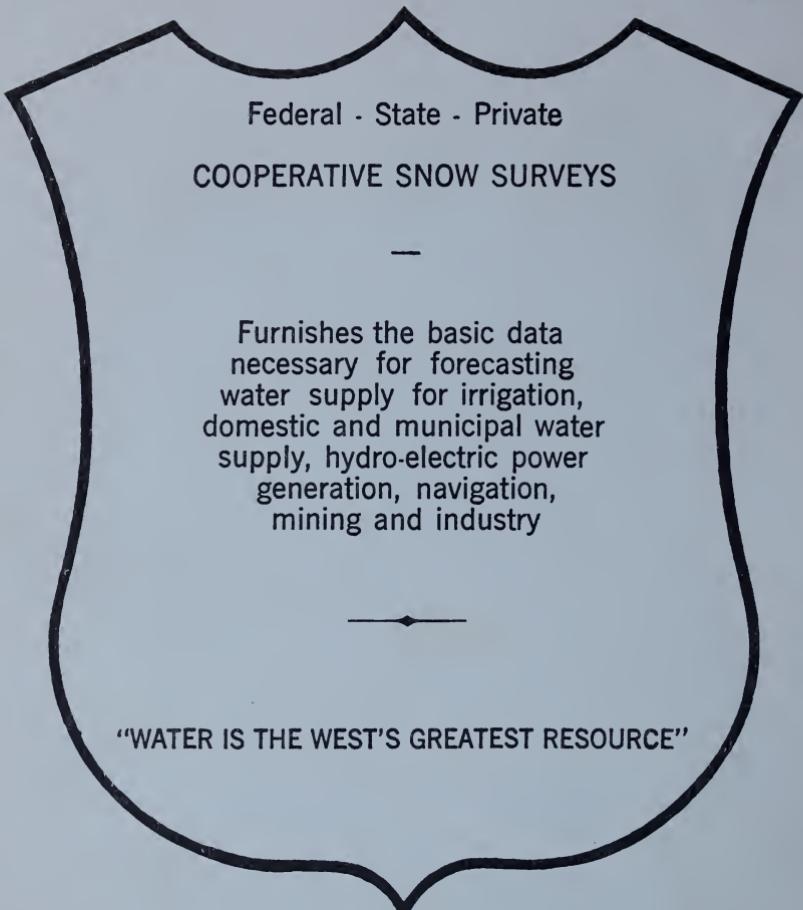
No.	Name	Sec.	Twp.	Rge.	Elev.	No.	Name	Sec.	Twp.	Rge.	Elev.
<u>Cheyenne</u>											
1 SD	Upper Spearfish	21	3N	1E	6500	12 C	Phantom Valley	7	5N	75W	9300
<u>North Platte</u>											
7 C	Park View	24	5N	75W	9200	16 C	Berthoud Pass	35	2S	75W	9700
8 C	Columbine	21	5N	82W	9300	37 C	M. F. Camp Ground	16	3S	77W	9000
136 C	Northgate	7	11N	79W	8500	44 C	Piddler Guich	1	8S	80W	11000
7 W	Bottie Creek	24	14N	85W	8200	59 C	Lulu	25	6N	76W	10200
8 W	Webber Spring	27	14N	85W	9000	64 C	N. Inlet Grand Lake	26	4N	75W	9000
9 W	Old Battle	29	14N	85W	9800	65 C	Lake Irene	8	5N	75W	10600
37 W	North French Creek	27	16N	80W	10200	69 C	Arrow	34	1S	75W	9900
38 W	North Barrett Creek	30	16N	80W	9400	70 C	Lapland	16	2S	76W	9500
39 W	Ryan Park	34	16N	81W	8400	79 C	Fremont Pass	2	8S	76W	11400
67 W	Spring Creek	32	15N	85W	9000	91 C	Lynx Pass	27	2N	78W	9100
68 W	Aibany	18	14N	78W	9400	96 C	Shrine Pass	15	6S	75W	10500
71 W	Pearl	18	12N	82W	8900	97 C	Grizzly Peak	2	5S	76W	11250
<u>Laramie</u>											
88 C	Roach	5	10N	77W	9800	102 C	Glen-Mar Ranch	31	2S	77W	8850
111 C	McIntyre	35	10N	76W	9100	106 C	Monarch Lake	30	2N	74W	8500
3 W	Brooklyn Lake	11	16N	78W	10200	112 C	Granby	11	2N	77W	8700
11 W	Foxpark	21	13N	78W	9200	127 C	Grand Lake	36	4N	75W	8600
35 W	Libby Lodge	29	16N	78W	8700	128 C	Berthoud Summit	10	2S	75W	11300
36 W	Hairpin Turn	24	16N	79W	9500	139 C	Frazer View	34	2S	75W	10600
<u>Sweetwater</u>											
29 W	Grannier Meadows	19	30N	100W	9000	143 C	Gore Pass	2	1N	82W	9500
47 W	South Pass	13	30N	101W	9000	146 C	Frisco	16	6S	78W	9300
57 W	Larson Creek	12	30N	103W	9000	147 C	Snake River	9	5S	76W	9700
<u>Laramie Peaks District</u>											
39 W	La Bonte	11	27N	74W	8450	158 C	Summit Ranch	8	4S	78W	10000
70 W	Boxelder	31	30N	75W	9000	163 C	Vail Pass	28	5S	79W	10000
<u>South Platte</u>											
1 C	Cameron Pass	2	6N	76W	10300	167 C	Kokomo	23	7S	79W	10600
2 C	Chambers Lake	6	7N	75W	9000	168 C	Rando	10	7S	80W	9500
3 C	Big South	33	8N	75W	8600	<u>Roaring Fork</u>					
5 C	East Portal	2	2S	74W	9400	33 C	Ind. Pass Tunnel	30	11S	82W	10700
14 C	Hoosier Pass	13	8S	75W	11400	34 C	North Lost Trail	20	11S	82W	9200
15 C	Fairplay	33	9S	77W	10000	45 C	Nast	1	9S	83W	8700
41 C	Wild Basin	24	3N	74W	10000	100 C	Ivanhoe	12	9S	82W	10400
50 C	Deadman Hill	26	10N	75W	10200	144 C	Ruby	11	12S	83W	11500
60 C	University Camp	26	1N	75W	10300	<u>Yampa</u>					
61 C	Loveland Pass	27	4S	75W	10600	6 C	Dry Lake	26	7N	84W	8300
68 C	Hour Glass Lake	18	7N	75W	9500	9 C	Elk River	21	5N	82W	9500
83 C	Jefferson Creek	14	7S	76W	10100	140 C	Routt Line	13	5N	85W	9700
95 C	Hidden Valley	23	5N	75W	9550	141 C	Rabbit Ears	30	5N	85W	9550
115 C	Deer Ridge	19	5N	75W	9050	142 C	Yampa View	21	5N	84W	8500
116 C	Copeland Lake	21	3N	75W	8600	<u>White</u>					
117 C	Empire	21	3S	75W	9650	35 C	Buffo Mountain	15	2S	91W	9000
118 C	Geneva Park	18	6S	74W	9750	36 C	Rio Blanco	28	1N	85W	8500
120 C	Antero	1	13S	77W	9200	<u>Plateau Creek</u>					
128 C	Red Feather	26	10N	74W	9000	56 C	Mesa Lakes	35	11S	96W	10000
133 C	Moffatt	2	2S	74W	9400	85 C	Trickle Divide	23	11S	94W	10000
134 C	Ward	1	1N	75W	9500	<u>Gunnison River</u>					
137 C	Berthoud Falls	16	3S	75W	10500	18 C	Crested Butte	22	13S	86W	9000
148 C	Longs Peak	32	4N	75W	10500	46 C	Park Cone	19	14S	82W	9700
156 C	Lost Lake	32	8N	75W	9300	53 C	Alexander Lake	2	12S	25W	10000
34 C	Pole Mountain	35	15N	72W	8700	55 C	Snowshoe Mesa	14	13S	89W	7500
<u>Arkansas River</u>											
19 C	Tennessee Pass	21	8S	80W	10200	58 C	Ironton Park	29	40N	7W	9800
21 C	Twin Lakes Tunnel	22	11S	82W	10500	87 C	Park Reservoir	34	11S	94W	9500
72 C	Whiskey Creek	37.2N	105W	10300		89 C	Porphyry Creek	19	49N	8E	10800
74 C	La Veta Pass	22	28S	70W	9300	101 C	Kannah Creek	5	12S	95W	10700
78 C	Four Mile Park	23	11S	81W	9700	104 C	Lake City	13	40N	4W	10300
81 C	Rius Lakes	30	31S	69W	10000	132 C	McClure Pass	1	11S	89W	9500
92 C	Monarch Pass	16	49N	6E	10500	155 C	Red Mountain	13	42N	5W	11000
119 C	Saint Elmo	31	15S	80W	10600	<u>San Juan</u>					
121 C	Timberline	8	9S	81W	11100	29 C	Upper San Juan	10	37N	1E	10000
165 C	Cooper Hill	2	8S	80W	10600	30 C	Silverton	10	41N	7W	9400
166 C	East Fork	9	8S	79W	10700	31 C	Cascade	12	39N	9W	8850
						135 C	La Plata	4	36N	11W	9700
						149 C	Spud Mountain	32	40N	8W	10700
						150 C	Molas Lake	7	40N	7W	10500
						151 C	Howardville	15	41N	7W	9800
						152 C	Mineral Creek	36	42N	8W	10300

LIST AND LOCATION OF SNOW COURSES (CONTINUED)

No.	Name	Sec.	Twp.	Rge.	Elev.	No.	Name	Sec.	Twp.	Rge.	Elev.
<u>Dolores</u>						<u>Arizona (Williams)</u>					
23 C	Rico	11	39N	11W	8700	7 A	Iron Springs	22	14N	3W	6000
24 C	Telluride	6	42N	8W	8600	15 A	Willow Ranch	16	21N	11W	5000
25 C	Lizzard Head	24	41N	10W	10300	<u>Arizona (Lower Colorado)</u>					
114 C	Trout Lake	8	41N	9W	9700	9 A	Chalendar	27	22N	3E	7100
<u>Green</u>						10 A	Grand Canyon	21	30N	4E	7500
23 W	Dutch Joe	33	31N	104W	8700	11 A	Bright Angel	34	33N	4E	8400
24 W	Mulligan Park	17	35N	108W	8900	<u>Rio Grande</u>					
25 W	Kendall R. S.	23	38N	110W	7900	26 C	Wolf Creek	4	37N	2E	10000
26 W	Loomis Park	14	37W	111W	8500	27 C	Upper Rio Grande	13	40N	4W	9350
27 W	Snyder Basin	15	29N	114W	8040	47 C	Silver Lakes	15	36N	5E	9600
28 W	Piney La Barge	19	29N	114W	8820	49 C	River Springs	25	33N	6E	9300
<u>Arizona (Gila)</u>						76 C	Summitville	30	37N	4E	11530
11 NM	Frisco Divide	21	6S	20W	8000	77 C	Cumbres Pass	17	32N	5E	10000
14 NM	State Line	5	6S	21W	8000	80 C	Santa Maria	8	41N	2W	9700
22 NM	Taylor Creek	20	10S	10W	7850	82 C	Culebra	37.2N	105.2W	10000	
23 NM	Inman	6	11S	10W	7800	84 C	Fort Garland	13	29N	72W	8200
1 A	Nutrisio	23	6N	30E	8500	108 C	Platoro	22	36N	4W	9950
2 A	Beaver Head	13	4N	30E	8000	109 C	West Conejos	25	35N	4E	9450
3 A	Coronado Trail	26	5N	30E	8000	110 C	La-Manga	11	33N	5E	10000
29 A	Rose Canyon	15	12S	16E	7300	122 C	Pyramid	26	41N	5W	10300
30 A	Bear Wallow	6	12S	16E	8100	123 C	Spring Creek Pass	2	42N	3W	10900
<u>Arizona (Salt)</u>						124 C	Pool Table Mt.	19	41N	2E	10000
4 A	McNary	14	8N	23E	7200	125 C	Lake Humphrey	32	40N	1E	9300
5 A	Forest Dale	2	9N	21E	6000	126 C	Cochetopa Pass	12	45N	3E	10000
6 A	Milk Ranch	28	8N	23E	7000	154 C	Porcupine	2	41N	3W	10400
20 A	Pacheta				7800	155 C	Wolf Creek Summit	6	37N	2E	11000
21 A	Fort Apache	18	7N	27E	9000	1 NM	Red River	29	28N	15E	9500
22 A	Baldy	28	7N	27E	9000	2 NM	Taos Canyon	10	25N	15E	9000
23 A	Maverick Fork	13	6N	27E	9050	4 NM	Aspen Grove	12	18N	10E	9100
31 A	Workman Creek	33	6N	14E	5860	9 NM	Hematite Park	8	28N	15E	9500
<u>Arizona (Little Colorado)</u>						12 NM	Tres Ritos	23	22N	13E	9000
12 A	Fort Valley	22	22N	6E	7350	15 NM	Payrole	16	28N	7E	9700
13 A	Mormon Lake	13	18N	8E	7350	17 NM	Chama Divide	36.9N	106.7W	7750	
19 A	Mormon Mountain	14	18N	8E	7500	18 NM	Chamita	36.9N	106.7W	8500	
<u>Arizona (Verde)</u>						19 NM	Cordova	22	22N	13E	10100
8 A	Camp Wood	3	16N	6W	5700	20 NM	Panohuela	27	19N	12E	8300
16 A	Antelope Park	29	19N	8E	7300	21 NM	Big Tesuque	17	18N	11E	10000
17 A	Casner Park	19	18N	8E	6930	24 NM	Elk Cabin	8	18N	11E	8250
18 A	Munds Park	7	18N	7E	6500	26 NM	Rio En Medio	8	18N	11E	10400
						28 NM	Quemazon	34	20N	5E	9300
						29 NM	Bateman	5	26N	6E	9300
						31 NM	Fenton Hill	18	19N	3W	8900

SD - South Dakota; C - Colorado; W - Wyoming; A - Arizona; NM - New Mexico





Federal - State - Private
COOPERATIVE SNOW SURVEYS

Furnishes the basic data
necessary for forecasting
water supply for irrigation,
domestic and municipal water
supply, hydro-electric power
generation, navigation,
mining and industry

"WATER IS THE WEST'S GREATEST RESOURCE"